



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,147	09/22/2003	Mark A. Cleveland	024.0024	2780

29906 7590 09/26/2005

INGRASSIA FISHER & LORENZ, P.C.  
7150 E. CAMELBACK, STE. 325  
SCOTTSDALE, AZ 85251

EXAMINER
----------

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/668,147	<b>Applicant(s)</b> CLEVELAND, MARK A.	
	<b>Examiner</b> Ula C. Ruddock	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7 and 9-13 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-4, 6, 7, 9-13 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Examiner has carefully considered Applicant's amendment and accompanying remarks filed July 5, 2005. The objections to the specification and the 112, 2<sup>nd</sup> paragraph rejections have been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1-4, 9, 12, 13, 14, and 16 are rejected under 35 U.S.C. 102(b & e) as being anticipated by Obeshaw (US 2002/0006523). Obeshaw discloses vibration damping structural members. The structural member can be used in the transportation, aerospace, and defense industries in applications such as airplane components [0073]. The core region may be completely filled with any desired core material such as foam [0014]. The materials for inner section and outer section can comprise the same material [0015]. The materials for the inner or outer portions comprise any suitable composite material [0017]. The composites can be a reinforced resin matrix material [0018]. The resin can be an epoxy thermoset resin [0019] and the materials used to reinforce the resin matrix include graphite or carbon fibrous material [0021]. A damping layer can be incorporated into the structural member [0042]. As seen in Figure 12, the damping layer (reference point 12) is seen adjacent to both the inner and outer portions. The damping layer can be a viscoelastic adhesive of various polymers [0045].

***Rejection is maintained.***

***Claim Rejections - 35 USC § 103***

4. Claims 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obeshaw (US 2002/006523), as shown above. Obeshaw disclosed the claimed invention except for the teaching that the low density core comprises a material having a thickness of about one quarter wavelength of a dominant frequency to which the acoustic composite construction or fairing may be exposed and that the low density core has a thickness of about 15-16 cm.

It should be noted that the thickness of the core is a result effective variable. The thickness of the core directly affects the vibration damping property of the composite. Therefore, it would have been obvious to have made the core comprise a material that has a thickness of about one quarter wavelength of a dominant frequency to which the acoustic composite construction or fairing may be exposed and to have made the low density core have a thickness of about 15-16 cm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the thickness of the core, motivated by the desire to create a composite with increased vibration damping properties and capabilities.

***Rejection is maintained.***

***Response to Arguments***

5. Applicant's arguments filed July 5, 2005, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the two opposing face sheets of the present invention do not form a closed surface configuration having a continuous or closed surface.

This argument is not commensurate in scope with the claims because the claims, as presently written, fail to preclude a closed surface configuration having a continuous or closed surface. Furthermore, the claims are written in "comprising" or open language and do not preclude the use of additional layers. Applicant argues that the Obeshaw invention does not disclose or suggest the use of a bonding material that enables relative movement of two opposing face sheets. This is argument is not persuasive because it is the Examiner's position that the Obeshaw invention will have some degree of "relative movement." Applicant also argues that the Examiner has failed to set forth a motivation in the 103 rejection. This argument is not persuasive because the Examiner has clearly set forth a motivation in the previous Office Action, which was to create a composite with increased vibration damping properties and capabilities.

### ***Conclusion***

**6. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR *UCR*

*Ula Ruddock*  
**Ula C. Ruddock**  
Primary Examiner  
Tech Center 1700